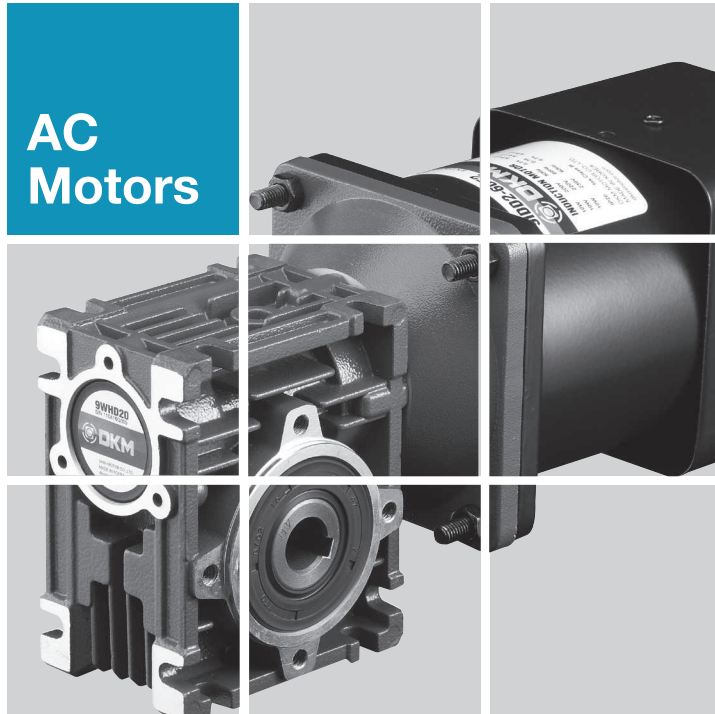


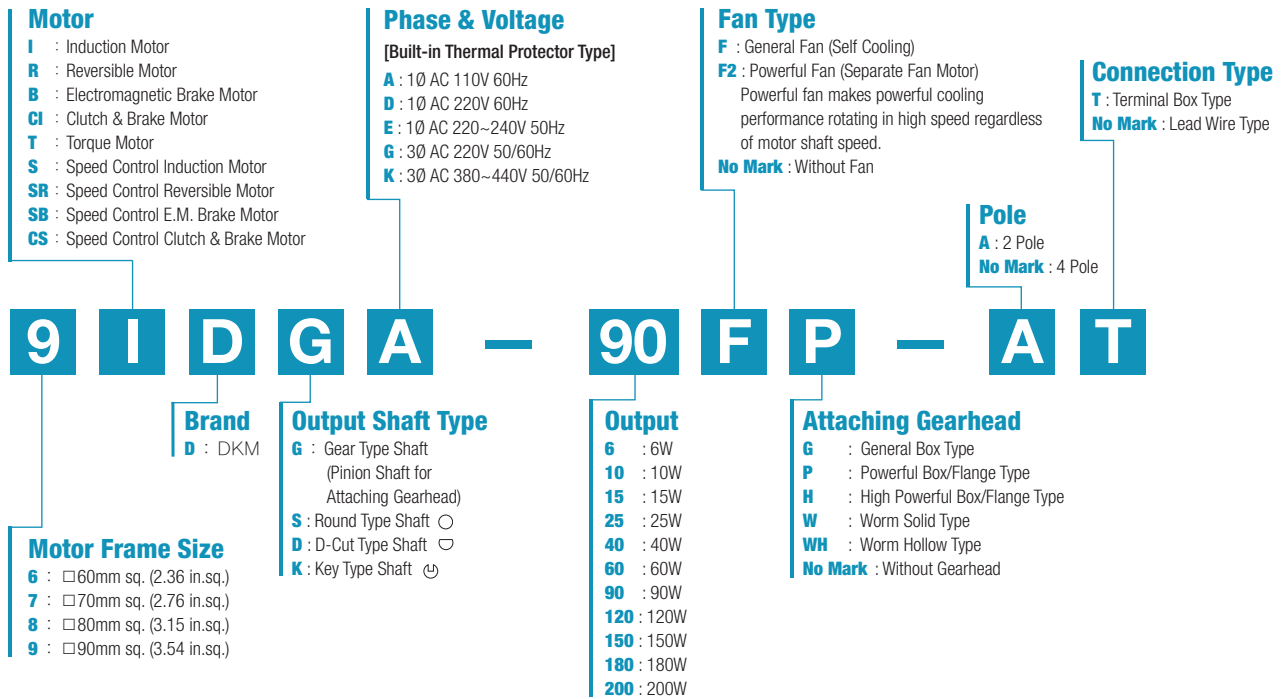
**AC
Motors**



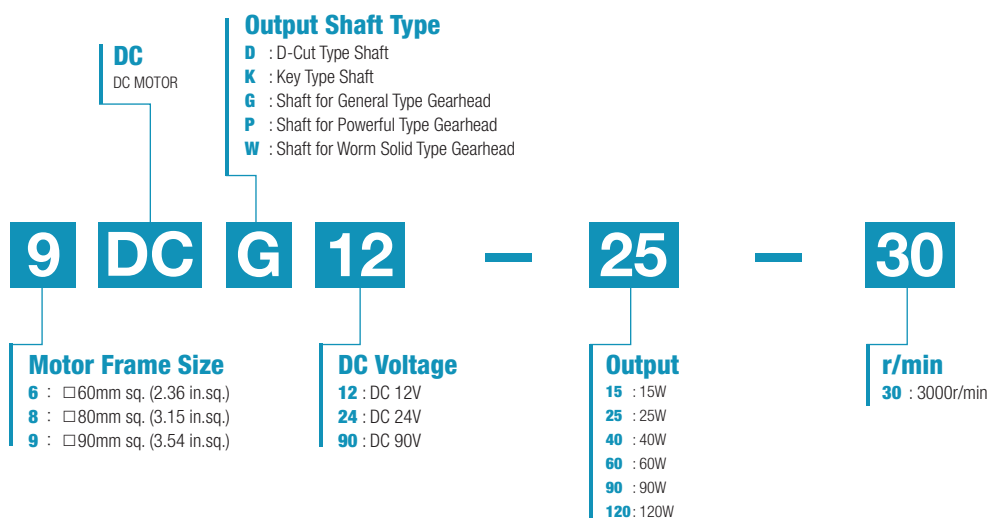
A Information

Product Coding System

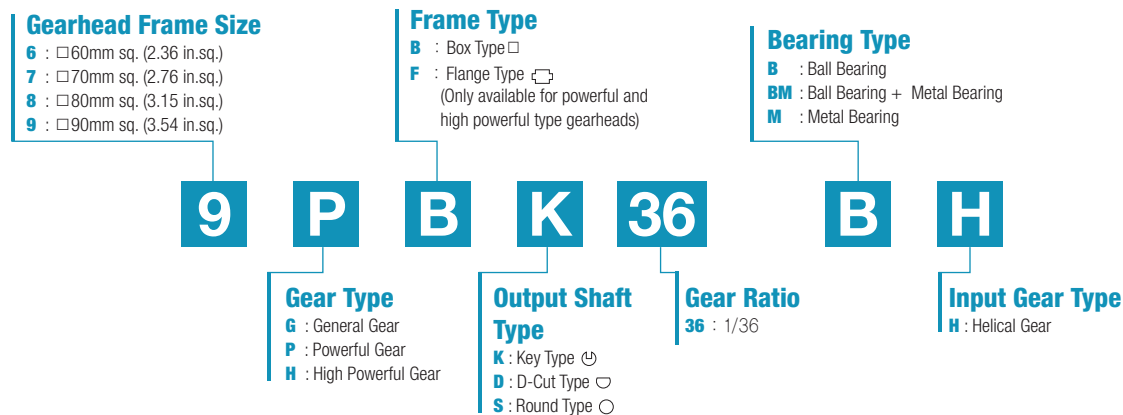
AC Motors



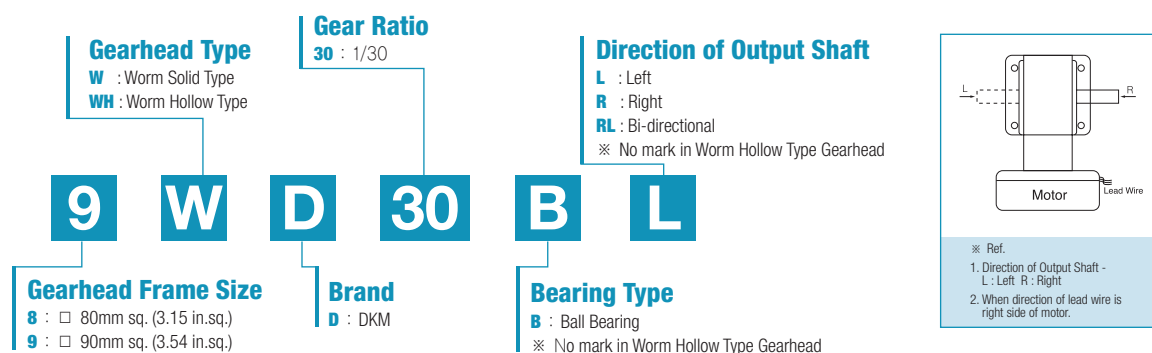
DC Motors



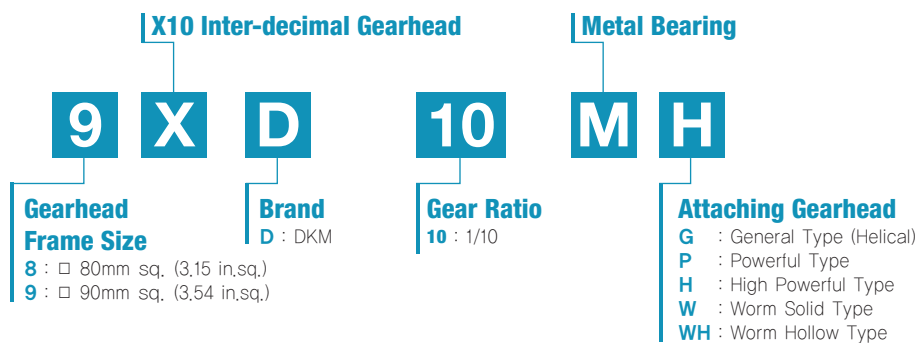
Parallel Gearhead



Worm Gearhead



Inter-decimal Gearhead



In case of requiring high gear reduction ratio that cannot be generated by single gearhead, please use Inter-decimal gearhead with general gearhead. And please be advised that in this case only revolution speed of output shaft will reduce by 10:1 without increasing of maximum permissible torque.

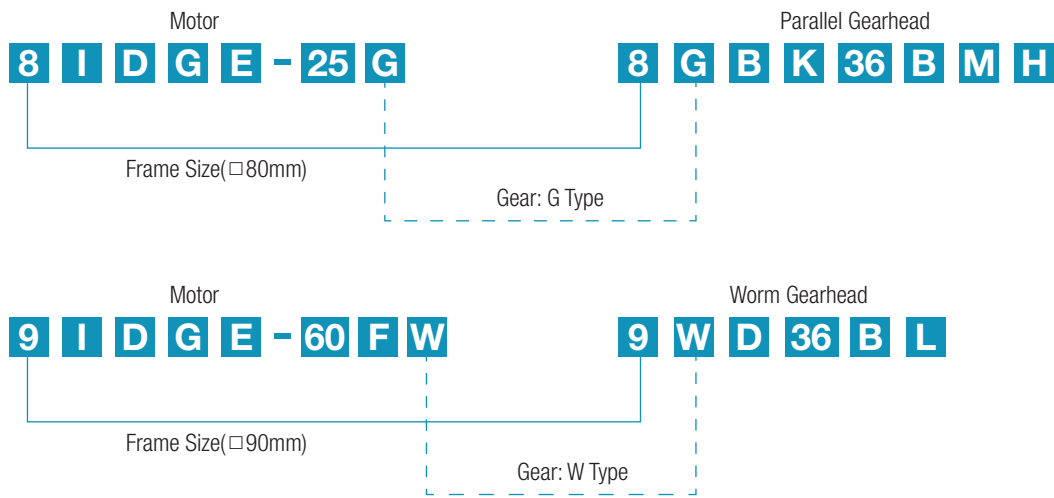
A Information

Product Coding System

Assembly of Motor and Gearhead

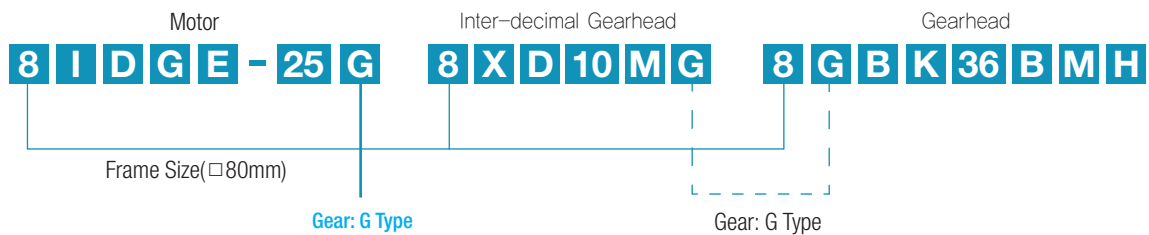
Motor + Gearhead

- As shown in the following scheme, motor and gearhead which have same frame size and gear type could be assembled.

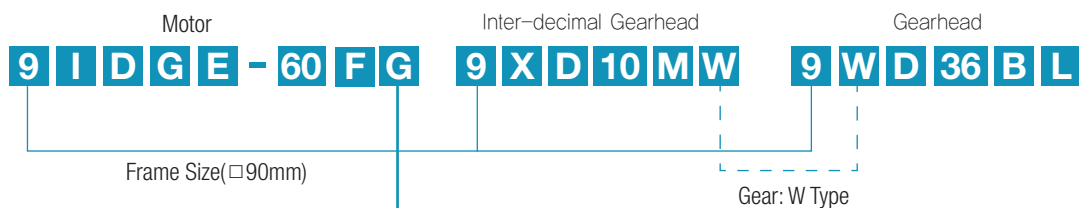


Motor + Inter-decimal Gearhead + Gearhead

- When using an inter-decimal gearhead together, give attention to the gear types of motor, gearhead and inter-decimal gearhead.



- When attaching inter-decimal gearhead, the output shaft type of the motor is always G Type. For example, when using P/H/W/WH type gearhead, only the gear type of inter-decimal gearhead is identical with attached gearhead and the output shaft type of the motor is G type. (Refer to the scheme below.)



Gear types of gearhead and inter-decimal gearhead have to be identical.
The output shaft type of motor is always G type regardless of gear type of gearhead.

Contents ▶▶

A Information

- A-01 Product Coding System
- A-04 Products Lineup
- A-08 General Information
- A-12 Terminology
- A-15 Caution for Using

B AC Motors

- B-01 Technical Data of AC Motor
- B-06 Induction Motor
- B-48 2 Pole Motor
- B-66 Reversible Motor
- B-98 Electromagnetic Brake Motor
- B-138 Clutch & Brake Motor
- B-154 Torque Motor
- B-168 Speed Control System
 - B-171 Speed Controller FX1000A
 - B-173 Speed Controller DSK
 - B-175 Speed Controller DSKS
 - B-178 Speed Control Induction Motor
 - B-212 Speed Control Reversible Motor
 - B-240 Speed Control E.M. Brake Motor
 - B-266 Speed Control Clutch & Brake Motor

C DC Motors

- C-01 Technical Data of DC Motor
- C-04 DC Motor
- C-17 Speed Controller DSD-90

D Gearheads

- D-01 Technical Data of Gearhead
- D-07 Parallel Gearhead
- D-12 Worm Gearhead
- D-14 Inter-decimal Gearhead

E Options

- E-01 Mounting Plate
- E-02 Extension Cable
- E-03 Output Flange / Output Shaft

Definition of Motor

Motor is a machine to get a driving force for rotation or straight movement by converting the electrical energy into mechanical energy and the light-weighted motor which enables to select the model suitable for the load, has less noise and vibration as well as no exhaust pollution.

Features of DKM AC Motor

DKM AC geared motor was developed first in Korea in 1987 and has been used in a good reputation throughout the whole areas of domestic/overseas industry up to know. Our AC geared motor is proud of various and wide range of specification which satisfies various electrical requirements from all over the world.

Various and Abundant Models

- There are various and abundant models in frame size covering □ 60/70/80/90mm such as Induction Motor, 2 Pole Motor, Reversible Motor, E.M. Brake Motor, Clutch & Brake Motor, Torque Motor and Speed Control Motor.
- For use voltage, we have various voltage specification covering all areas in the globe: 100V 50/60Hz(Japan), 200V 50/60Hz(Japan), 110V 60Hz(Taiwan), 220V 60Hz(Korea, Taiwan), 115V 60Hz(North America), 230V 50Hz(Europe, Oceania), 220V/240V 50Hz(South-East Asia)

Low Noise and Low Vibration

- Due to the enhancement of quality standard such as places and conditions for motors to use, the low noise and low vibration are required.
- To satisfy these conditions, we employed high precision of gear processing and skiving cutting method and we are making a rotor which is the root cause of vibration by verifying with balance machine for low noise and low vibration.

Easy to Use

- Easy and safe to use as motor and gearhead are sold according to the requirements so that it can be designed and manufactured optimally.
- It is easy to drive to get a driving force by connecting capacitor to the commercial power available to be used anywhere and anytime. As capacitor is not needed for three phase power, it is available to get a driving force easily by connecting three phase power to the motor directly.

Just-In-Time System

- Just-In-Time system is available in DKM Motor Co., Ltd. for the best delivery system. DKM realized user's satisfaction with the world best delivery system.

Types of Motor

Classification by Power

- **AC motor:** A motor operated by AC power. For example, inductive motor, synchronous motor, AC commutator motor etc.

1) Single Phase Motor

- Single phase power is composed of one phase as commercial power for home.
- As power itself does not make motor rotate, capacitor is connected to auxiliary coil to start.

2) Three Phase Motor

- Three phase motor stands for electrical power and it is consisted of three electrical sources with a phase offset of 120° in voltage.
- Connect the power to motor to start and the rotor will start to run easily.
- The efficiency of motor is high and the starting torque is relatively big.

- **DC motor:** A motor which rotates by supplying the direct current to the armature. The torque generated by placing the coil between magnetic poles N and S and applying the current to this coil rotates the motor. Whenever this coil passes the neutral shaft, it turns the direction of current reversely and rotates continuously

Classification by Function

● Motor with Constant Speed

1) Induction Motor: An induction motor is a type of AC motor where power is supplied to the rotor by means of electromagnetic induction. These motors are widely used in industrial drives, particularly polyphase induction motors, because they are rugged and have no brushes. Their speed is determined by the frequency of the supply current, so they are most widely used in constant-speed applications, although variable speed versions, using variable frequency drives are becoming more common.

2) Reversible Motor: A kind of induction motor and a motor having the same characteristic in any direction such as left turn or right turn. In principle, it is same as induction motor but there is no relation of main coil and auxiliary coil like general induction motor in order to stand frequent normal/reverse rotation and get a big starting torque.

● Electromagnetic Brake Motor

It is a motor embedded with fail-safe electromagnetic brake. Perfect braking enables to get a staying power. Brake runs only when the power is shutdown, so this is suitable as a brake for safe use.

※ DKM has 'A Type' electronic brake motor which runs when the power is applied. (Customized specification)

● Clutch & Brake Motor

DKM Clutch & Brake motor is equipped with Clutch & Brake mechanism available to be used with gearhead. As the continuously rotating induction motor and Clutch & Brake are combined, this can be used for frequent start/stop, position control, index operation and relative value feeding operation etc.

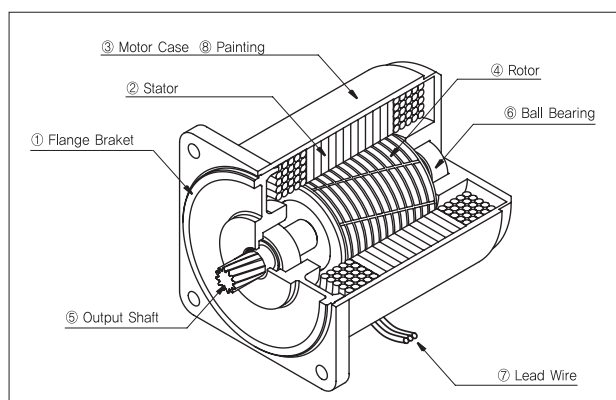
● Torque Motor

DKM torque motor has big starting torque and sloping characteristics. It runs safely over the whole area of rotation speed-torque characteristics. (Torque is highest at zero speed and decreases steadily with increasing speed.) With these characteristics, this can be used for more application as a winding or tension motor.

● Speed Control Motor

User can easily set and adjust the motor speed. There are three kinds of speed controller for AC speed motors. Select the best system depending upon your application.

Structure of AC Motor



① Flange Bracket

Die-cast aluminum bracket is press-fitted into the motor case. The flange and the housing are a single body type which plays an important part to attach the motor alone or combine the gearhead.

② Stator

This is comprised of a stator core made from laminated silicon/steel plates, a polyester-coated copper coil and insulation film. The roles are to generate magnetic field, form the rotation and run the rotor.

③ Motor Case

Die-cast aluminum with a machined finish inside

④ Rotor

It is comprised of laminated silicon/steel plates with die-cast aluminum. Rotor plays the part to change the electric energy to mechanical energy and transfer it to outside through shaft.

⑤ Output Shaft

There are round type shaft, D-cut type shaft, key type shaft which are for using by motor itself and gear type shaft (pinion shaft) which is for attaching gearhead. It is made by S45C with a machined finish.

⑥ Ball Bearing

It ensures that the rotor remains at the right position for the reliability and fast rotational motion.

⑦ Lead Wire

Lead wires with heat-resistant polyethylene coating

⑧ Painting

Backed finish of acrylic resin and melamine resin with beautiful look

Temperature Rise of AC Motor

Temperature Rise

- In operation of motor, the loss inside of motor is changed to heat causing the motor's temperature to rise.
 - Induction Motor (for continuous duty) reaches the saturation point of temperature rise in about two or three hours of operation and temperature stabilizes.
 - Reversible Motor (30 minutes rating) reaches their limit of temperature rise in about 30 minutes of operation. If operation continues as it is, the temperature will increase further.

Measuring Temperature Rise

- DKM uses the following methods for temperature measurement and for the determination of a motor's allowable temperature rise.
 - Thermometer Method: The temperature rise at which the temperature rise becomes saturated during motor operation is measured by using a thermometer or thermocouple installed in the center of the motor case. The temperature rise is the difference between the ambient temperature and measured temperature during motor operation.
 - Resistance Method: This is the way of measuring the winding temperature according to the change in resistance value. The motor's winding resistance and ambient temperature is measured by using a resistance meter and thermostat.

Overheating Protection Device

- In case of that a running motor locks due to overload or the input current increases due to any reason or ambient temperature increases suddenly, the motor's temperature rises abruptly. If this state continues, the insulation performance may deteriorate and, in extreme cases, it may cause a fire. To avoid this case, DKM employs the following overheating protection devices.
 - **Thermal Protector (TP)**
DKM installs the thermal protector for overheating protection of the motor. The TP employs a bimetal contact with pure silver used in the contacts. Pure silver has the lowest electrical resistance of all materials and has thermal conductivity second only to copper. (Operating Temperature: Open 120°C±5°C / Close 90 °C±5°C)
 - **Impedance Protection**
Impedance-protected motor has higher impedance in the motor windings so although the motor locks, the increase in input current is minimized and temperature will not rise.

Insulation Class

- DKM Motor's insulation class is B class. Insulation class is according to heat-resistance class. According to JIS C4003(IEC60085), it is defined as below. It is also available to use other materials for some particular insulation class according to operating conditions or user's request. (Customized specification)

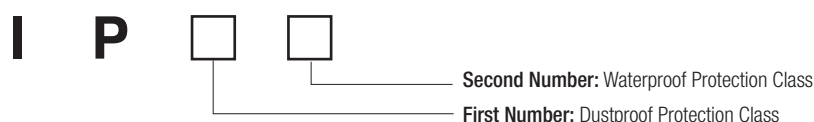
Insulation Class	Max. Permissible Temp.
Y	90°C
A	105°C
E	120°C
B	130°C
F	155°C
H	180°C

FAN

- It is available to attach two kinds of fan to the DKM's motor; 'General Fan (F type)' and 'Powerful Fan (F2 type)'.
General fan is attached to motor shaft rotating in same speed as that of motor shaft. (1,800r/min in 60Hz, 1,500r/min in 50Hz) Powerful fan makes powerful cooling performance rotating in high speed regardless of motor shaft speed. (3,200r/min in 60Hz. Temperature reducing over 10°C is available comparing general fan.)
DKM employs general fan to the motors with continuous speed and employs powerful fan by customers' special order to the continuous speed's motor. But in case of speed control motor in which speed control is needed, powerful fan is employed basically because there is little cooling effect in low speed if general fan is used.

Equipment Protection Structure (IP Code)

- The IP code is one of the equipment protection structures and indicates the dust-resistance and waterproofing degrees of protection for the equipment.
- The code consists of the first number and the second number.



- “X” is used when one of the two protection classes is not specified in the name. (e.g. IPX5, IP4X)
- Meanings of IP code and testing conditions are as below;

1) The Classification of Dustproof

IP Code	Protection Specifications for Dustproof	
First Number	Protection Level	Test Condition
IP0□	None	None
IP1□	Protection against approach by hands	Solid objects with a diameter of 50mm or more do not enter.
IP2□	Protection against approach by fingers	Solid objects with a diameter of 12mm or more do not enter.
IP3□	Protection against tips of tools etc.	Solid objects with a diameter of 2.5mm or more do not enter.
IP4□	Protection against ingress of wires etc.	Solid objects with a diameter of 1.0mm or more do not enter.
IP5□	Protection against powdery dust	Powdery dust that may inhibit normal operation does not enter.
IP6□	Completely dustproof design	Cannot be penetrated by powdery dust.

2) The Classification of Waterproof

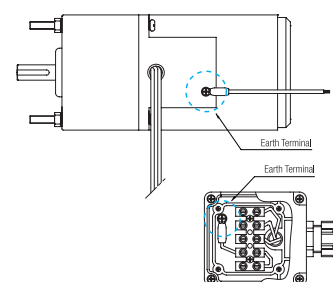
IP Code	Protection Specifications for Waterproof	
Second Number	Protection Level	Test Condition
IP□0	None	None
IP□1	Protection against water drops falling vertically	Water drops at a rate of 3 to 5L/min. for 10 minutes from a height of 200mm
IP□2	Protection against water drops from directions within a range of 15° relative to the vertical plane	Water drops at a rate of 3 to 5L/min. for 10 minutes from directions within 15° from a height of 200mm
IP□3	Protection against raindrops from directions within a range of 60° relative to the vertical plane	Sprayed water at a rate of 10L/min. for 10 minutes from directions within 60° from a height of 200mm
IP□4	Protection against ingress of splashes from all directions	Sprayed water at a rate of 10L/min. for 10 minutes from all directions at a distance of 300 to 500mm
IP□5	Protection against water jet from all directions	Sprayed water jet of 30kPa at a rate of 12.5L/min. for 3 minutes from all directions at a distance of 3m
IP□6	Protection against strong water jet such as ocean waves	Sprayed water jet of 100kPa at a rate of 100L/min. for 3 minutes from all directions at a distance of 3m
IP□7	Usable after immersion in water under specified conditions	Immersion to a depth of 1m for 30 minutes
IP□8	Usable under water	Determined through cooperation between user and manufacturer.

- The IP code of DKM's motor is indicated in the name plate (motor label).

Earth Method

Lead Wire Type

- As shown in the figure, connect the earth wire to the earth hole in the side of the motor.
Screw the earth wire to the earth hole. (Sequence: earth hole → washer → earth wire → screw bolt)

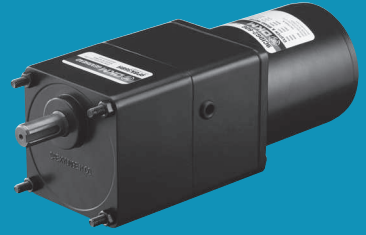


Terminal Box Type

- Connect the earth wire to the earth terminal in the terminal box.



Clutch & Brake Motor



Index

Outline of Clutch & Brake Motor	B-139
Clutch & Brake Motor 15W (□80mm)	B-141
Clutch & Brake Motor 25W (□80mm)	B-143
Clutch & Brake Motor 40W (□90mm)	B-145
Clutch & Brake Motor 60W (□90mm)	B-147
Clutch & Brake Motor 90W (□90mm)	B-149
Clutch & Brake Motor 120W (□90mm)	B-151

B AC Motors

Outline of Clutch & Brake Motor

Clutch & Brake Mechanism

- An internal clutch & brake mechanism for use with a gearhead is employed in clutch & brake motor. By the combination of a constantly rotating induction motor and a clutch and brake unit, the function of frequent start/stop, positioning, indexing, jogging and incremental feeding are available.

DKM's clutch & brake motor is designed for the quicker response time and higher torque to move the load. To meet high-frequency, starting and stopping applications, DKM uses induction motor for its continuous duty rating. So clutch & brake motor is not suitable for frequent bi-directional starting and stopping motion but suitable for unidirectional movement.

Structure and Mechanism

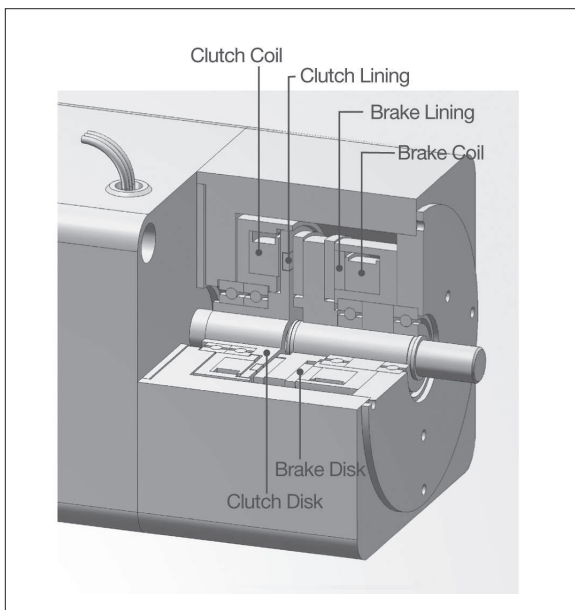
Output shaft is controlled by the use of the clutch and brake mechanism.

Run

When the 24 VDC is applied to the clutch coil, the armature of the clutch coil is drawn to the clutch plate, transmitting motor rotation to the output shaft. The motor continues to rotate.

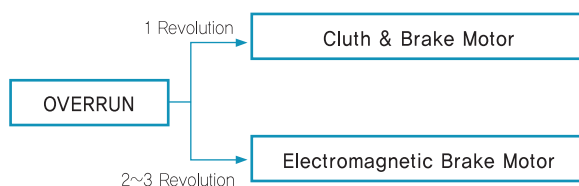
Stopping and Load Holding

By removing the 24 VDC from the clutch coil and, after a certain time lag, applying the 24 VDC to the brake coil, the output shaft will come to a stop. During braking the output shaft is released from the motor shaft, so the shaft may be stopped without being influenced by motor inertia. The motor will continue to rotate.



Brake Motor Selecting

[Selecting from stopping accuracy]



* The overrun values are those of an individual motor.

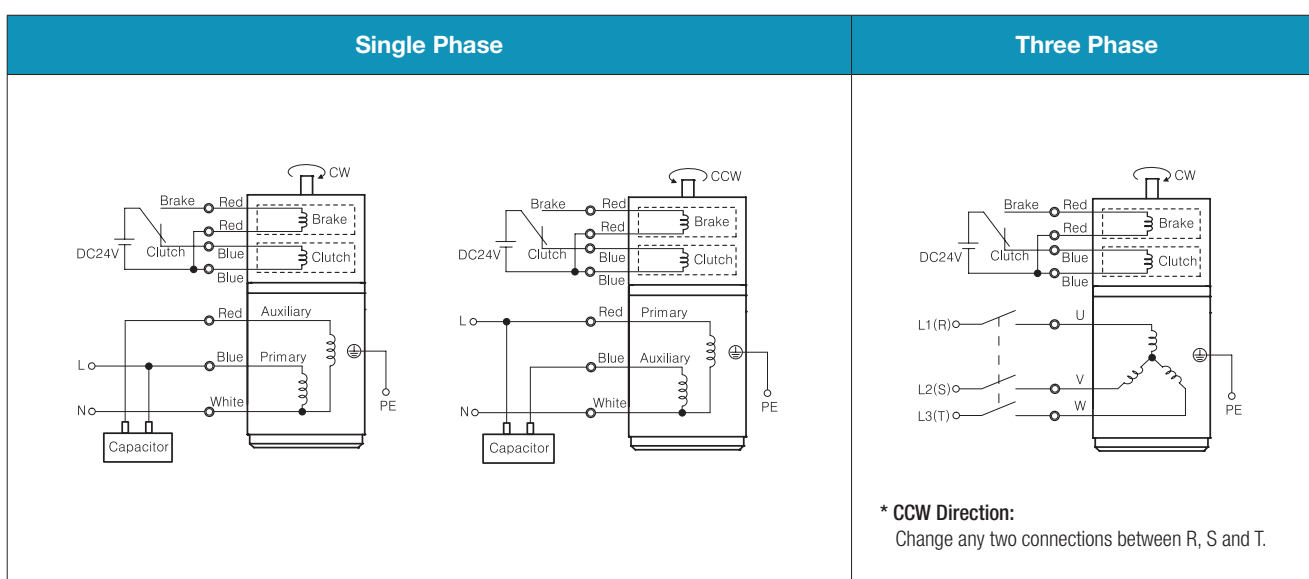
General Specifications

Item	Specification
Insulation Resistance	100M Ω or more when DC500V MEGA is applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5KV at 50Hz and 60Hz applied between the windings and the frame for 1 minute after rated motor operation under normal ambient temperature and humidity.
Temperature Rise	Temperature rise of windings are 80 $^{\circ}$ C or less measured by the resistance change method after rated motor operation with connecting a gearhead or equivalent heat radiation plate.
Insulation Class	Class B [130 $^{\circ}$ C]
Overheat Protection	Operating temperature (Built-in thermal protector type motor): Open 120 $^{\circ}$ C \pm 5 $^{\circ}$ C, Close 90 $^{\circ}$ C \pm 5 $^{\circ}$ C
Ambient Temperature	-10 $^{\circ}$ C \sim +40 $^{\circ}$ C (Three phase 220VAC: -10 $^{\circ}$ C \sim +50 $^{\circ}$ C)
Ambient Humidity	85% maximum

Clutch & Brake Specification

Model		Voltage (V)	Current (A)	Input (W)	Brake Torque (kgfcm)
□80mm C&B	Clutch	DC24	0.36	8.7	6
	Brake	DC24	0.32	7.7	25
□90mm C&B	Clutch	DC24	0.37	8.9	20
	Brake	DC24	0.33	7.9	35

Connection Diagrams



B AC Motors

Clutch & Brake Motor 15W (□80mm)

15W

 Clutch & Brake Motor
15W(□80mm)

 **Motor Image**

8CIDG□-15G+8GBK□BMH



Motor Specification

Model 8CIDG□-15G: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque		Rated Load				Capacitor μF / VAC
						kgfcm	N.m	Speed r/min	Current A	Torque kgfcm N.m		
8CIDGA-15G	15	1∅110	60	4	Cont.	0.84	0.084	1600	0.39	0.98	0.098	3.5 / 450
8CIDGD-15G	15	1∅220	60	4	Cont.	1.40	0.140	1600	0.22	1.10	0.110	1.2 / 450
8CIDGE-15G	15	1∅220	50	4	Cont.	1.30	0.130	1250	0.17	1.30	0.130	1.0 / 450
		1∅240				1.55	0.155		0.19	1.48	0.148	
8CIDGG-15G	15	3∅220	50	4	Cont.	4.80	0.480	1300	0.22	1.40	0.140	-
			60			4.00	0.400	1600	0.18	1.00	0.100	
8CIDGK-15G	15	3∅380	50	4	Cont.	4.60	0.460	1300	0.13	0.20	0.120	-
			60			3.60	0.360	1550	0.11	1.00	0.100	
		3∅400	50	4	Cont.	5.00	0.500	1300	0.14	1.40	0.140	
			60			4.00	0.400	1600	0.12	1.00	0.100	
		3∅415	50	4	Cont.	5.40	0.540	1350	0.15	1.20	0.120	
			60			4.20	0.420	1600	0.13	1.00	0.100	
		3∅440	50	4	Cont.	6.00	0.600	1350	0.16	1.40	0.140	
			60			4.60	0.460	1600	0.14	1.40	0.140	

- 1) Enter the phase & voltage code in the in the box (□) within the motor model name.
- 2) All models contain a built-in thermal protector.
- 3) For using clutch & brake motor, gearhead has to be attached. (Output shaft of motor: Gear Type Shaft)

Max. Permissible Torque at Output Shaft of Gearhead

60Hz

Motor Model	Gearhead Model	Gear Ratio r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180
			8CIDG□ -15G	8GBK□ BMH	kgfcm N.m	3.0 0.29	3.6 0.35	5.0 0.49	6.0 0.59	7.5 0.73	9.0 0.88	12.5 1.22	14.9 1.46	17.9 1.76	22.5 2.21	27.0 2.65	29.4 2.88	32.6 3.20	40.8 4.00	49.0 4.80	61.2 6.00	73.4 7.20	80.0 7.84

Motor Model	Gearhead Model	Gear Ratio r/min	200	250	300	360
			8CIDG□ -15G	8GBK□ BMH	kgfcm N.m	80.0 7.84

50Hz

Motor Model	Gearhead Model	Gear Ratio r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180
			8CIDG□ -15G	8GBK□ BMH	kgfcm N.m	3.5 0.34	4.2 0.41	5.8 0.57	7.0 0.68	8.7 0.85	10.5 1.02	14.5 1.42	17.4 1.71	20.9 2.05	26.3 2.57	31.5 3.09	34.3 3.36	38.1 3.73	47.6 4.66	57.1 5.60	71.4 7.00	80.0 7.84	80.0 7.84

Motor Model	Gearhead Model	Gear Ratio r/min	200	250	300	360
			8CIDG□ -15G	8GBK□ BMH	kgfcm N.m	80.0 7.84

- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearhead model name.
- 3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.
- 4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.
The actual speed is 2~20% less than the displayed value, depending on the size of the load.

Dimensions

GEARED MOTOR

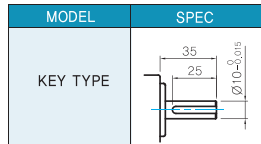
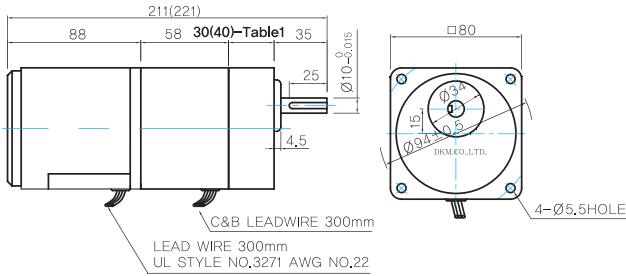
G TYPE GEARHEAD

- MOTOR MODEL:
8CIDG□-15G (NO FAN)

- GEARHEAD MODEL:
8GBK□BMH

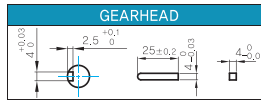
- GEARHEAD OUTPUT SHAFT

- 30(40)-Table1



SIZE(mm)	GEAR RATIO
30	8GBK3BMH - 8GBK18BMH
40	8GBK25BMH - 8GBK360BMH

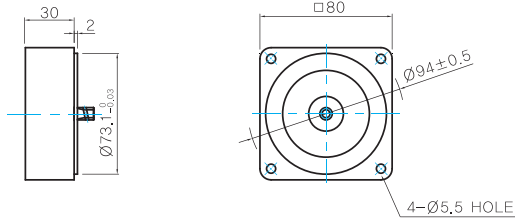
- KEY SPEC



INTER-DECIMAL GEARHEAD

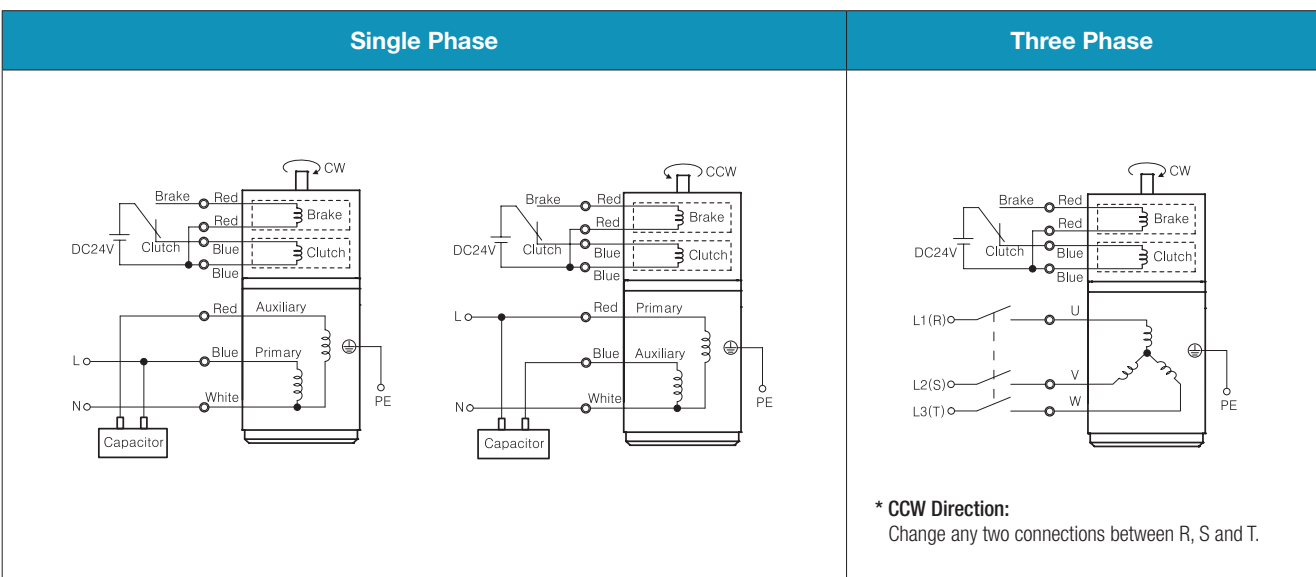
- MODEL:
8XD10M□

WEIGHT



PART	WEIGHT(kg)	
MOTOR	1,6	
CLUTCH & BRAKE	1,05	
GEAR HEAD	8GBK3BMH - 8GBK18BMH	0,48
	8GBK25BMH - 8GBK30BMH	0,61
	8GBK36BMH - 8GBK180BMH	0,67
	8GBK200BMH - 8GBK360BMH	0,63
	8XD10M□	0,44

Connection Diagrams



- The direction of motor rotation is as viewed from the shaft end of the motor.
- CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

B AC Motors

Clutch & Brake Motor 25W (□80mm)

25W Clutch & Brake Motor
25W(□80mm)

 **Motor Image**



Motor Specification

Model 8CIDG□-25G: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load			Capacitor μF / VAC	
								Speed r/min	Current A	Torque kgfcm N.m		
8CIDGA-25G	25	1∅110	60	4	Cont.	1.67	0.167	1550	0.46	1.58	0.158	6.0 / 250
8CIDGD-25G	25	1∅220	60	4	Cont.	2.00	0.200	1600	0.27	1.60	0.160	2.0 / 450
8CIDGE-25G	25	1∅220	50	4	Cont.	1.10	0.110	1200	0.23	2.10	0.210	1.3 / 450
		1∅240				1.30	0.130		0.25	2.20	0.220	
8CIDGG-25G	25	3∅220	50	4	Cont.	5.00	0.500	1300	0.32	2.00	0.200	-
			60			0.40	0.040	1600	0.25	1.60	0.160	
8CIDGK-25G	25	3∅380	50	4	Cont.	3.60	0.360	1250	0.14	2.00	0.200	-
			60			3.00	0.300	1500	0.12	1.65	0.165	
		3∅400	50	4	Cont.	3.80	0.380	1250	0.15	2.20	0.220	
			60			3.20	0.320	1500	0.13	1.80	0.180	
		3∅415	50	4	Cont.	4.10	0.410	1300	0.15	2.00	0.200	
			60			3.40	0.340	1550	0.13	1.80	0.180	
		3∅440	50	4	Cont.	4.40	0.440	1300	0.17	2.20	0.220	
			60			3.60	0.360	1600	0.14	1.60	0.160	

- 1) Enter the phase & voltage code in the in the box (□) within the motor model name.
- 2) All models contain a built-in thermal protector.
- 3) For using clutch & brake motor, gearhead has to be attached. (Output shaft of motor: Gear Type Shaft)

Max. Permissible Torque at Output Shaft of Gearhead

60Hz

Motor Model	Gearhead Model	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180	
			r/min	600	500	360	300	240	200	144	120	100	72	60	50	45	36	30	24	20	18	15	12	10
8CIDG□ -25G	8GBK□ BMH	kgfcm	4.5	5.4	7.5	9.0	11.2	13.4	18.7	22.4	26.9	33.8	40.5	44.1	49.0	61.2	73.4	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	0.44	0.53	0.73	0.88	1.10	1.32	1.83	2.20	2.64	3.31	3.97	4.32	4.80	6.00	7.20	7.84	7.84	7.84	7.84	7.84	7.84	7.84

Motor Model	Gearhead Model	Gear Ratio	200	250	300	360
			r/min	9	7	6
8CIDG□ -25G	8GBK□ BMH	kgfcm	80.0	80.0	80.0	80.0
		N.m	7.84	7.84	7.84	7.84

50Hz

Motor Model	Gearhead Model	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180	
			r/min	500	417	300	250	200	167	120	100	83	60	50	42	38	30	25	20	17	15	13	10	8
8CIDG□ -25G	8GBK□ BMH	kgfcm	5.5	6.6	9.1	11.0	13.7	16.4	22.8	27.4	32.9	41.3	49.5	53.9	59.8	74.8	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	0.54	0.64	0.89	1.07	1.34	1.61	2.24	2.68	3.22	4.04	4.85	5.28	5.86	7.33	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84

Motor Model	Gearhead Model	Gear Ratio	200	250	300	360
			r/min	7	6	5
8CIDG□ -25G	8GBK□ BMH	kgfcm	80.0	80.0	80.0	80.0
		N.m	7.84	7.84	7.84	7.84

- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearhead model name.
- 3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.
- 4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.
The actual speed is 2~20% less than the displayed value, depending on the size of the load.

Dimensions

GEARED MOTOR

G TYPE GEARHEAD

- MOTOR MODEL:
8CIDG□-25G (NO FAN)

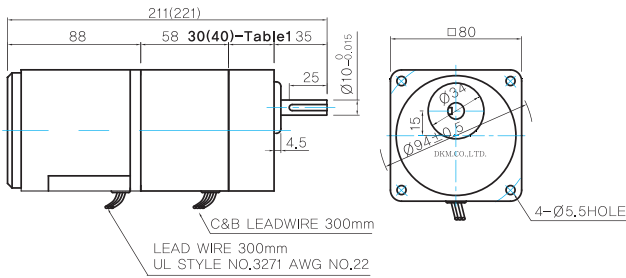
- GEARHEAD MODEL:
8GBK□BMH

GEARHEAD OUTPUT SHAFT

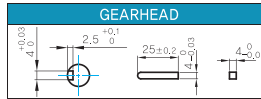
MODEL	SPEC
KEY TYPE	

30(40)-Table1

SIZE(mm)	GEAR RATIO
30	8GBK3BMH - 8GBK18BMH
40	8GBK25BMH - 8GBK360BMH



KEY SPEC

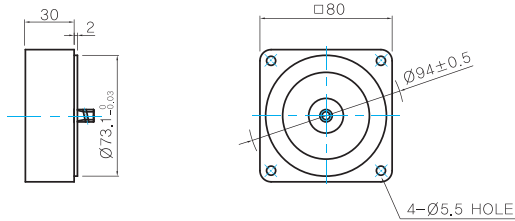


INTER-DECIMAL GEARHEAD

- MODEL:
8XD10M□

WEIGHT

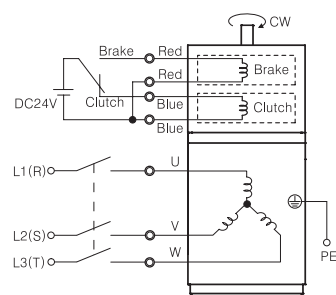
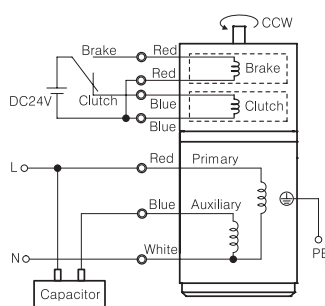
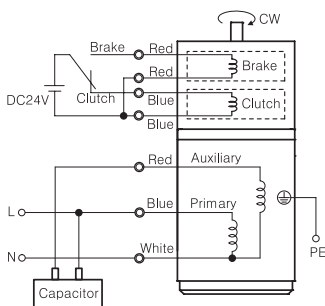
PART	WEIGHT(Kg)	
MOTOR	1,6	
CLUTCH & BRAKE	1,05	
GEAR HEAD	8GBK3BMH - 8GBK18BMH	0,48
	8GBK25BMH - 8GBK30BMH	0,61
	8GBK36BMH - 8GBK180BMH	0,67
	8GBK200BMH - 8GBK360BMH	0,63
	8XD10M□	0,44



Connection Diagrams

Single Phase

Three Phase



* CCW Direction:
Change any two connections between R, S and T.

- The direction of motor rotation is as viewed from the shaft end of the motor.
- CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

B AC Motors

Clutch & Brake Motor 40W (□90mm)

40W Clutch & Brake Motor
40W(□90mm)

 **Motor Image**



Motor Specification

Model 9CIDG□-40G: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load				Capacitor μF / VAC
								Speed r/min	Current A	Torque kgfcm N.m		
9CIDGA-40G	40	1∅110	60	4	Cont.	2.60	0.260	1600	0.80	2.80	0.280	10.0 / 250
9CIDGD-40G	40	1∅220	60	4	Cont.	2.60	0.260	1600	0.39	2.80	0.280	2.5 / 450
9CIDGE-40G	40	1∅220	50	4	Cont.	1.80	0.180	1300	0.33	3.00	0.300	2.0 / 450
		1∅240				2.20	0.220		0.36	3.60	0.360	
9CIDGG-40G	40	3∅220	50	4	Cont.	9.00	0.900	1300	0.31	3.20	0.320	-
			60			7.40	0.740	1600	0.27	2.45	0.245	
9CIDGK-40G	40	3∅380	50	4	Cont.	9.00	0.900	1300	0.20	3.20	0.320	-
			60			7.20	0.720	1550	0.18	2.80	0.280	
		3∅400	50	4	Cont.	10.00	1.000	1300	0.20	3.40	0.340	
			60			7.80	0.780	1550	0.18	3.00	0.300	
		3∅415	50	4	Cont.	11.00	1.100	1350	0.20	3.00	0.300	
			60			8.60	0.860	1600	0.18	2.80	0.280	
		3∅440	50	4	Cont.	12.00	1.200	1350	0.21	3.40	0.340	
			60			9.80	0.980	1600	0.19	3.00	0.300	

- 1) Enter the phase & voltage code in the in the box (□) within the motor model name.
- 2) All models contain a built-in thermal protector.
- 3) For using clutch & brake motor, gearhead has to be attached. (Output shaft of motor: Gear Type Shaft)

Max. Permissible Torque at Output Shaft of Gearhead

60Hz

Motor Model	Gearhead Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	25	30	36	40
			9CIDG□ -40G	9GBK□BMH	kgfcm N.m	4.6 0.46	7.0 0.68	8.4 0.82	11.6 1.14	13.9 1.37	17.4 1.71	20.9 2.05	23.2 2.28	29.1 2.85	34.9 3.42	37.8 3.70	52.5 5.15

Motor Model	Gearhead Model	Gear Ratio r/min	50	60	75	90	100	120	150	180
			9CIDG□ -40G	9GBK□BMH	kgfcm N.m	95.2 9.33	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80

50Hz

Motor Model	Gearhead Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	25	30	36	40
			9CIDG□ -40G	9GBK□BMH	kgfcm N.m	5.6 0.55	8.5 0.83	10.2 1.00	14.1 1.38	16.9 1.66	21.2 2.07	25.4 2.49	28.2 2.77	35.3 3.46	42.3 4.15	45.9 4.50	63.8 6.25

Motor Model	Gearhead Model	Gear Ratio r/min	50	60	75	90	100	120	150	180
			9CIDG□ -40G	9GBK□BMH	kgfcm N.m	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80

- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearhead model name.
- 3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.
- 4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.
The actual speed is 2~20% less than the displayed value, depending on the size of the load.

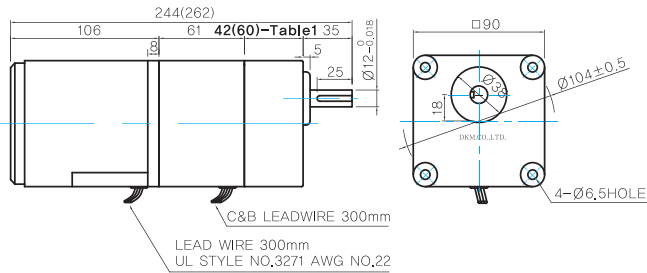
Dimensions

GEARED MOTOR

G TYPE GEARHEAD

● MOTOR MODEL:
9CIDG□-40G (NO FAN)

● GEARHEAD MODEL:
9GBK□BMH



GEARHEAD OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

42(60)-Table1

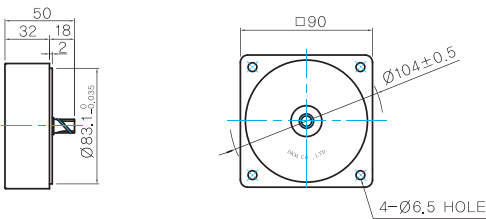
SIZE(mm)	GEAR RATIO
42	9GBK2BMH - 9GBK15BMH
60	9GBK18BMH - 9GBK180BMH

KEY SPEC

GEARHEAD

INTER-DECIMAL GEARHEAD

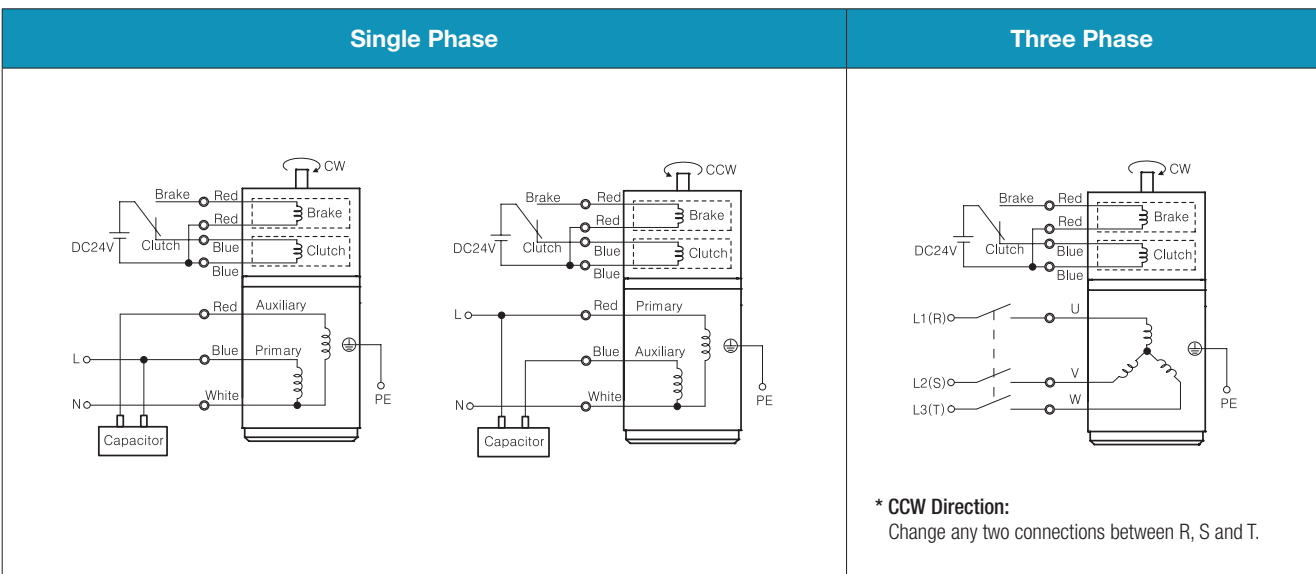
● MODEL:
9XD10M□



WEIGHT

PART	WEIGHT(Kg)	
MOTOR	2,4	
CLUTCH & BRAKE	1,35	
GEAR HEAD	9GBK2BMH - 9GBK15BMH	0,67
	9GBK18BMH - 9GBK30BMH	0,96
	9GBK36BMH - 9GBK180BMH	1,07
	8XD10M□	0,5

Connection Diagrams



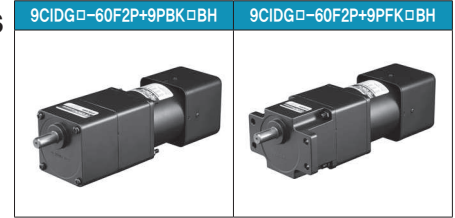
- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

B AC Motors

Clutch & Brake Motor 60W (□90mm)

60W Clutch & Brake Motor
60W(□90mm)

Motor Images



Motor Specification

Model 9CIDG□-60F2P: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque		Rated Load				Capacitor μF / VAC
						kgfcm	N.m	Speed r/min	Current A	Torque kgfcm N.m		
9CIDGA-60F2P	60	1∅110	60	4	Cont.	3.40	0.340	1600	1.40	4.60	0.460	16.0 / 250
9CIDGD-60F2P	60	1∅220	60	4	Cont.	4.20	0.420	1600	0.63	4.60	0.460	4.0 / 450
9CIDGE-60F2P	60	1∅220	50	4	Cont.	3.40	0.340	1300	0.48	4.80	0.480	3.5 / 450
		1∅240				4.00	0.400		0.54	5.40	0.540	
9CIDGG-60F2P	60	3∅220	50	4	Cont.	15.00	1.500	1350	0.59	4.60	0.460	-
			60			12.80	1.280	1600	0.49	4.20	0.420	
9CIDGK-60F2P	60	3∅380	50	4	Cont.	17.00	1.700	1350	0.33	4.80	0.480	-
			60			13.80	1.380	1600	0.29	4.60	0.460	
		3∅400	50	4	Cont.	18.60	1.860	1350	0.36	5.20	0.520	
			60			15.20	1.520	1600	0.30	5.00	0.500	
		3∅415	50	4	Cont.	20.00	2.000	1350	0.40	5.60	0.560	
			60			16.20	1.620	1600	0.33	5.20	0.520	
		3∅440	50	4	Cont.	22.00	2.200	1350	0.44	6.00	0.600	
			60			18.20	1.820	1600	0.36	5.80	0.580	

- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) All models contain a built-in thermal protector.
- 3) For using clutch & brake motor, gearhead has to be attached. (Output shaft of motor: Gear Type Shaft)

Max. Permissible Torque at Output Shaft of Gearhead

60Hz

Motor Model	Gearhead Model	Gear Ratio	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40
9CIDG□ -60F2P	9PBK□BH 9PFK□BH	r/min	900	600	500	360	300	240	200	144	120	100	90	72	60	50	45
		kgfcm N.m	7.0 0.68	10.5 1.02	12.5 1.23	17.4 1.71	20.9 2.05	26.1 2.56	31.4 3.07	39.4 3.86	47.3 4.63	56.7 5.56	57.1 5.60	71.4 7.00	85.7 8.40	102.8 10.08	114.2 11.20

Motor Model	Gearhead Model	Gear Ratio	50	60	75	90	100	120	150	180
9CIDG□ -60F2P	9PBK□BH 9PFK□BH	r/min	36	30	24	20	18	15	12	10
		kgfcm N.m	142.8 13.99	171.4 16.79	192.2 18.83	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60

50Hz

Motor Model	Gearhead Model	Gear Ratio	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40
9CIDG□ -60F2P	9PBK□BH 9PFK□BH	r/min	750	500	417	300	250	200	167	120	100	83	75	60	50	42	38
		kgfcm N.m	8.6 0.85	12.9 1.27	15.5 1.52	21.6 2.11	25.9 2.54	32.4 3.17	38.8 3.81	48.8 4.78	58.5 5.73	70.2 6.88	70.7 6.93	88.4 8.66	106.1 10.40	127.3 12.48	141.4 13.86

Motor Model	Gearhead Model	Gear Ratio	50	60	75	90	100	120	150	180
9CIDG□ -60F2P	9PBK□BH 9PFK□BH	r/min	30	25	20	17	15	13	10	8
		kgfcm N.m	176.8 17.33	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60

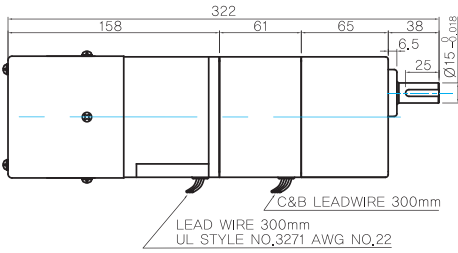
- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearhead model name.
- 3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.
- 4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.
The actual speed is 2~20% less than the displayed value, depending on the size of the load.

Dimensions

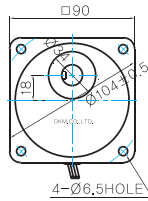
GEARED MOTOR

P TYPE GEARHEAD

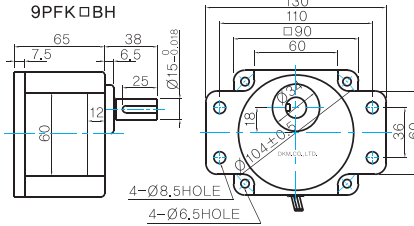
● MOTOR MODEL:
9CIDG□-60F2P (POWERFUL FAN)



● GEARHEAD MODEL:
9PBK□BH



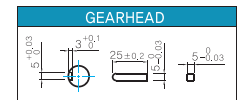
● GEARHEAD MODEL:
9PFK□BH



● GEARHEAD OUTPUT SHAFT

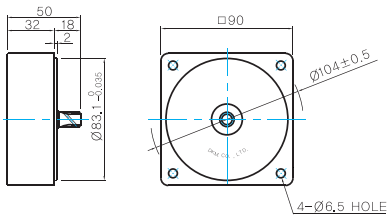
MODEL	SPEC
KEY TYPE	38 25 Ø15-0.018
9PBK□BH 9PFK□BH	

● KEY SPEC



INTER-DECIMAL GEARHEAD

● MODEL:
9XD10M□

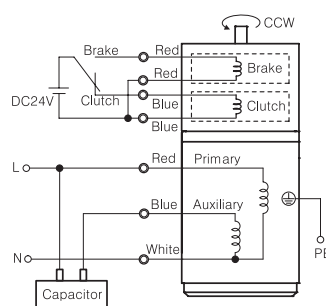
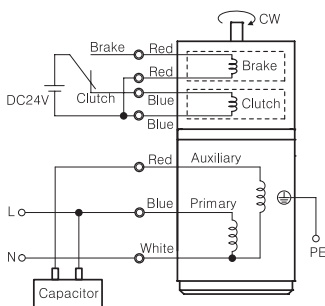


WEIGHT

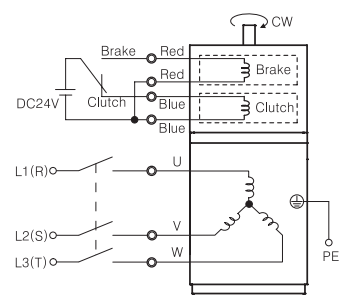
PART	WEIGHT(Kg)	
MOTOR	2,6	
CLUTCH & BRAKE	1,35	
GEAR HEAD	9PB(F)K2BH - 9PB(F)K18BH	1,3
	9PB(F)K20BH - 9PB(F)K180B	1,4
9XD10M□	0,5	

Connection Diagrams

Single Phase



Three Phase



* CCW Direction:
Change any two connections between R, S and T.

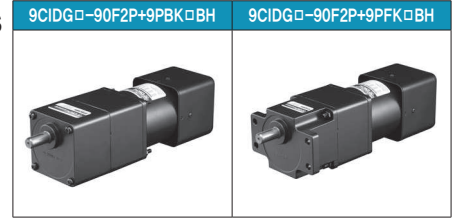
- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

B AC Motors

Clutch & Brake Motor 90W (□90mm)

90W Clutch & Brake Motor
90W(□90mm)

Motor Images



Motor Specification

Model 9CIDG□-90F2P: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load				Capacitor μF / VAC
								Speed r/min	Current A	Torque kgfcm N.m		
9CIDGA-90F2P	90	1∅110	60	4	Cont.	5.00	0.500	1600	1.90	6.20	0.620	20.0 / 250
9CIDGD-90F2P	90	1∅220	60	4	Cont.	5.20	0.520	1600	0.90	6.20	0.620	5.0 / 450
9CIDGE-90F2P	90	1∅220	50	4	Cont.	5.00	0.500	1300	0.70	7.40	0.740	5.0 / 450
		1∅240				6.00	0.600		0.76	8.60	0.860	
9CIDGG-90F2P	90	3∅220	50	4	Cont.	20.00	2.000	1300	0.66	7.80	0.780	-
			60			16.60	1.660	1600	0.55	5.80	0.580	
9CIDGK-90F2P	90	3∅380	50	4	Cont.	21.80	2.180	1300	0.40	7.80	0.780	-
			60			17.20	1.720	1600	0.33	5.80	0.580	
		3∅400	50	4	Cont.	24.00	2.400	1300	0.43	8.60	0.860	
			60			19.20	1.920	1600	0.36	6.20	0.620	
		3∅415	50	4	Cont.	26.00	2.600	1350	0.43	7.40	0.740	
			60			20.20	2.020	1600	0.37	6.80	0.680	
		3∅440	50	4	Cont.	29.00	2.900	1350	0.48	8.00	0.800	
			60			23.80	2.380	1650	0.37	6.00	0.600	

- 1) Enter the phase & voltage code in the in the box (□) within the motor model name.
- 2) All models contain a built-in thermal protector.
- 3) For using clutch & brake motor, gearhead has to be attached. (Output shaft of motor: Gear Type Shaft)

Max. Permissible Torque at Output Shaft of Gearhead

60Hz

Motor Model	Gearhead Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40
9CIDG□ -90F2P	9PBK□BH 9PFK□BH	kgfcm	11.3	16.9	20.3	28.2	33.9	42.3	50.8	63.8	76.5	91.8	92.5	115.6	138.7	166.5	185.0
		N.m	1.11	1.66	1.99	2.77	3.32	4.15	4.98	6.25	7.50	9.00	9.06	11.33	13.59	16.31	18.13

Motor Model	Gearhead Model	Gear Ratio r/min	50	60	75	90	100	120	150	180
9CIDG□ -90F2P	9PBK□BH 9PFK□BH	kgfcm	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		N.m	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60

50Hz

Motor Model	Gearhead Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40
9CIDG□ -90F2P	9PBK□BH 9PFK□BH	kgfcm	12.3	18.4	22.1	30.7	36.9	46.1	55.3	69.4	83.3	99.9	100.6	125.8	151.0	181.2	200.0
		N.m	1.20	1.81	2.17	3.01	3.61	4.51	5.42	6.80	8.16	9.79	9.86	12.33	14.79	17.75	19.60

Motor Model	Gearhead Model	Gear Ratio r/min	50	60	75	90	100	120	150	180
9CIDG□ -90F2P	9PBK□BH 9PFK□BH	kgfcm	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		N.m	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60

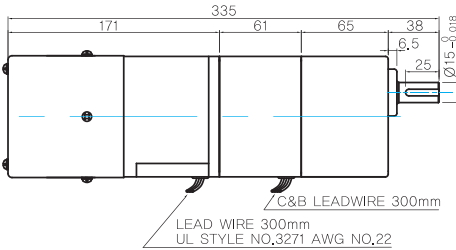
- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearhead model name.
- 3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.
- 4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.
The actual speed is 2~20% less than the displayed value, depending on the size of the load.

Dimensions

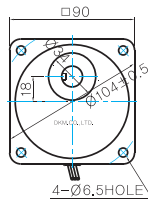
GEARED MOTOR

P TYPE GEARHEAD

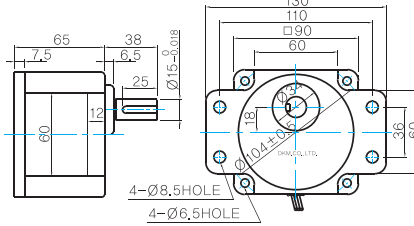
- MOTOR MODEL:
9CIDG□-90F2P (POWERFUL FAN)



- GEARHEAD MODEL:
9PBK□BH



- GEARHEAD MODEL:
9PFK□BH



- GEARHEAD OUTPUT SHAFT

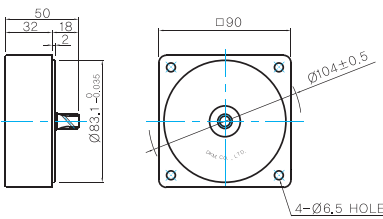
MODEL	SPEC
9PBK□BH 9PFK□BH	

- KEY SPEC

GEARHEAD

INTER-DECIMAL GEARHEAD

- MODEL:
9XD10M□

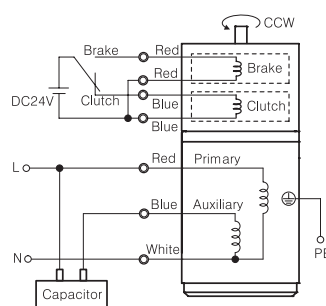
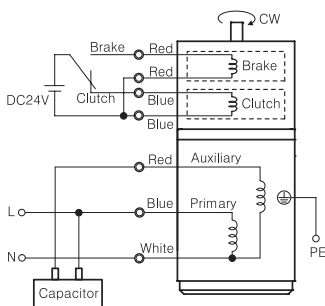


WEIGHT

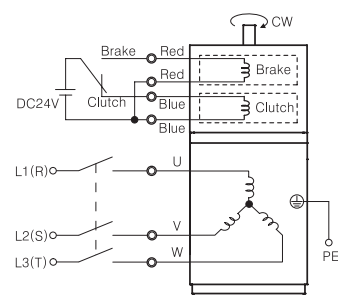
PART	WEIGHT(Kg)	
MOTOR	3,0	
CLUTCH & BRAKE	1,35	
GEAR HEAD	9PB(F)K2BH - 9PB(F)K18BH	1,3
	9PB(F)K20BH - 9PB(F)K180B	1,4
9XD10M□	0,5	

Connection Diagrams

Single Phase



Three Phase



* CCW Direction:
Change any two connections between R, S and T.

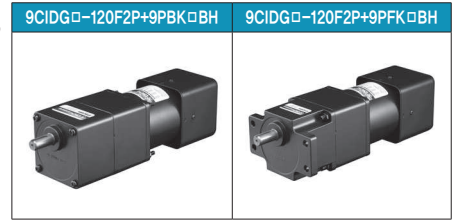
- The direction of motor rotation is as viewed from the shaft end of the motor.
- CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

B AC Motors

Clutch & Brake Motor 120W (□90mm)

120W Clutch & Brake Motor 120W(□90mm)

Motor Images



Motor Specification

Model 9CIDG□-120F2P: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load				Capacitor μF / VAC
								Speed r/min	Current A	Torque kgfcm N.m		
9CIDGA-120F2P	120	1∅110	60	4	Cont.	6.60	0.660	1600	2.00	7.40	0.740	25.0 / 250
9CIDGD-120F2P	120	1∅220	60	4	Cont.	6.00	0.600	1600	1.00	7.60	0.760	6.0 / 450
9CIDGE-120F2P	120	1∅220	50	4	Cont.	6.40	0.640	1250	0.90	9.40	0.940	6.0 / 450
		1∅240				7.80	0.780		1.00	10.20	1.020	
9CIDGG-120F2P	120	3∅220	50	4	Cont.	22.00	2.200	1300	0.82	9.20	0.920	-
			60			20.00	2.000	1550	0.78	7.80	0.780	
9CIDGK-120F2P	120	3∅380	50	4	Cont.	25.00	2.500	1300	0.48	9.00	0.900	-
			60			20.00	2.000	1550	0.43	8.00	0.800	
		3∅400	50	4	Cont.	27.40	2.740	1300	0.53	9.80	0.980	
			60			21.80	2.180	1550	0.45	8.60	0.860	
		3∅415	50	4	Cont.	29.80	2.980	1300	0.57	10.00	1.000	
			60			23.80	2.380	1600	0.44	7.80	0.780	
		3∅440	50	4	Cont.	32.00	3.200	1350	0.64	8.80	0.880	
			60			26.80	2.680	1600	0.48	8.60	0.860	

- 1) Enter the phase & voltage code in the in the box (□) within the motor model name.
- 2) All models contain a built-in thermal protector.
- 3) For using clutch & brake motor, gearhead has to be attached. (Output shaft of motor: Gear Type Shaft)

Max. Permissible Torque at Output Shaft of Gearhead

60Hz

Motor Model	Gearhead Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40
			9CIDG□ -120F2P	9PBK□BH 9PFK□BH	kgfcm N.m	12.6 1.24	18.9 1.85	22.7 2.23	31.5 3.09	37.8 3.71	47.3 4.64	56.8 5.56	71.3 6.98	85.5 8.38	102.6 10.05	103.4 10.13	129.2 12.66

Motor Model	Gearhead Model	Gear Ratio r/min	50	60	75	90	100	120	150	180
			9CIDG□ -120F2P	9PBK□BH 9PFK□BH	kgfcm N.m	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60

50Hz

Motor Model	Gearhead Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40
			9CIDG□ -120F2P	9PBK□BH 9PFK□BH	kgfcm N.m	16.3 1.59	24.4 2.39	29.3 2.87	40.7 3.99	48.8 4.78	61.0 5.98	73.2 7.17	101.7 9.96	122.0 11.96	146.4 14.35	162.7 15.94	200.0 19.60

Motor Model	Gearhead Model	Gear Ratio r/min	50	60	75	90	100	120	150	180
			9CIDG□ -120F2P	9PBK□BH 9PFK□BH	kgfcm N.m	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60

- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearhead model name.
- 3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.
- 4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.
The actual speed is 2~20% less than the displayed value, depending on the size of the load.

Dimensions

GEARED MOTOR

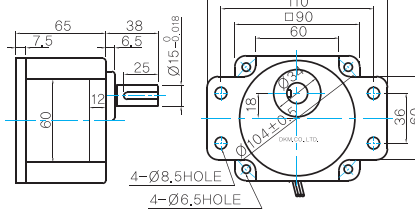
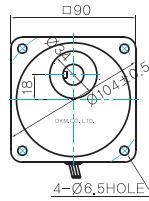
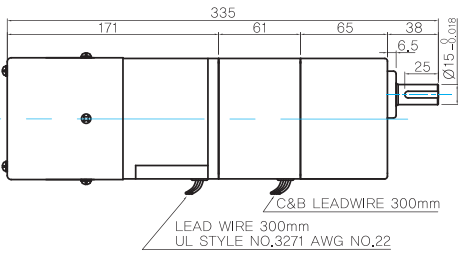
P TYPE GEARHEAD

● MOTOR MODEL:
9CIDG□-120F2P (POWERFUL FAN)

● GEARHEAD MODEL:
9PBK□BH

● GEARHEAD MODEL:
9PFK□BH

● GEARHEAD OUTPUT SHAFT



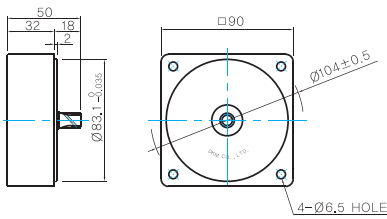
MODEL	SPEC
KEY TYPE	
9PBK□BH 9PFK□BH	

● KEY SPEC

GEARHEAD	

INTER-DECIMAL GEARHEAD

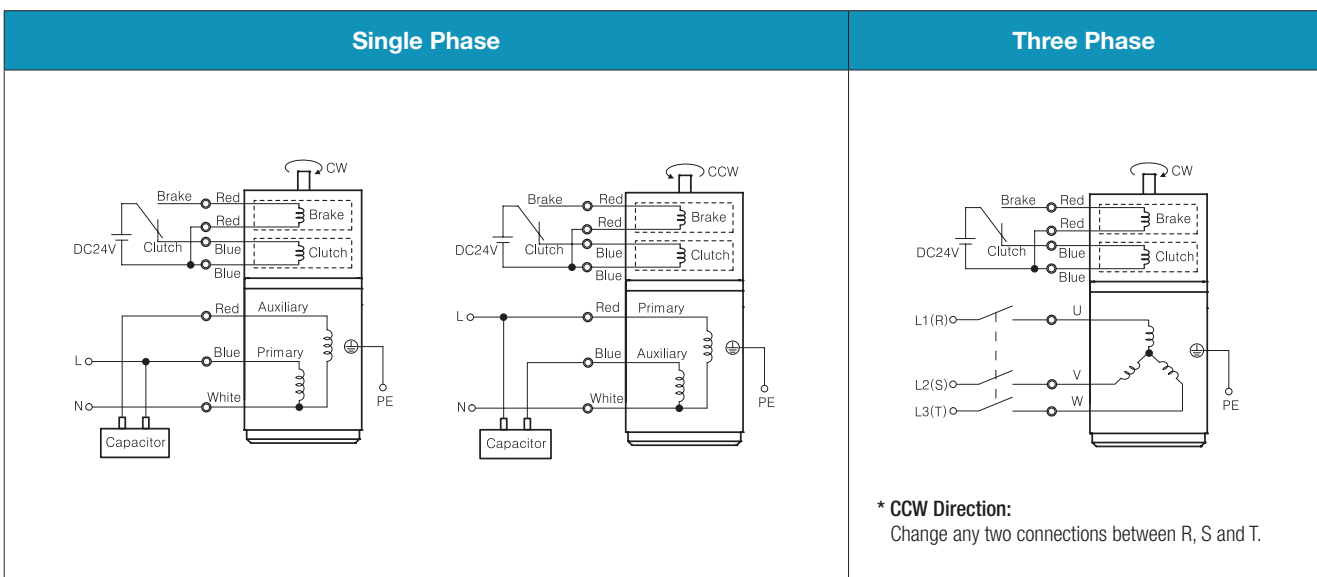
● MODEL:
9XD10M□



WEIGHT

PART	WEIGHT(Kg)	
MOTOR	3.0	
CLUTCH & BRAKE	1.35	
GEAR HEAD	9PB(F)K2BH - 9PB(F)K18BH	1.3
	9PB(F)K20BH - 9PB(F)K180B	1.4
9XD10M□	0.5	

Connection Diagrams



- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.



Contents ▶▶

A Information

- A-01** Product Coding System
- A-04** Products Lineup
- A-08** General Information
- A-12** Terminology
- A-15** Caution for Using

B AC Motors

- B-01** Technical Data of AC Motor
- B-06** Induction Motor
- B-48** 2 Pole Motor
- B-66** Reversible Motor
- B-98** Electromagnetic Brake Motor
- B-138** Clutch & Brake Motor
- B-154** Torque Motor
- B-168** Speed Control System
 - B-171** Speed Controller FX1000A
 - B-173** Speed Controller DSK
 - B-175** Speed Controller DSKS
 - B-178** Speed Control Induction Motor
 - B-212** Speed Control Reversible Motor
 - B-240** Speed Control E.M. Brake Motor
 - B-266** Speed Control Clutch & Brake Motor

C DC Motors

- C-01** Technical Data of DC Motor
- C-04** DC Motor
- C-17** Speed Controller DSD-90

D Gearheads

- D-01** Technical Data of Gearhead
- D-07** Parallel Gearhead
- D-12** Worm Gearhead
- D-14** Inter-decimal Gearhead

E Options

- E-01** Mounting Plate
- E-02** Extension Cable
- E-03** Output Flange / Output Shaft

E Options

Mounting Plate

Mounting Plate

It enables motor/gearhead to be mounted on installation place.
There are mounting plates of frame size □70/80/90mm for motor and gearhead.



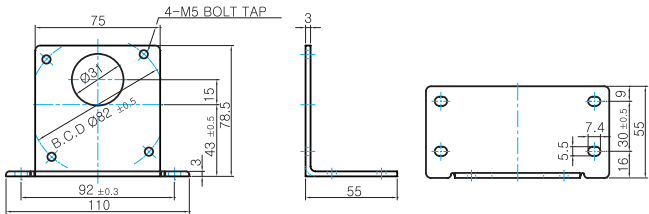
Product Code

D	BK	M	—	70
Brand D : DKM	Product BK : Bracket	Attaching Item M : Motor G : Gearhead		Frame Size 70 : □70mm Motor / Gearhead 80 : □80mm Motor / Gearhead 90 : □90mm Motor / Gearhead

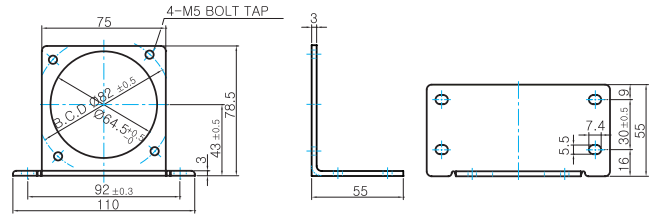
Dimensions

For Frame Size □70mm

● Model: DBKG-70

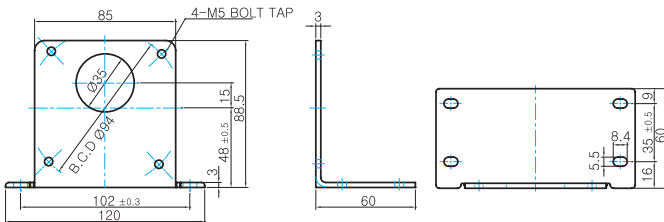


● Model: DBKM-70

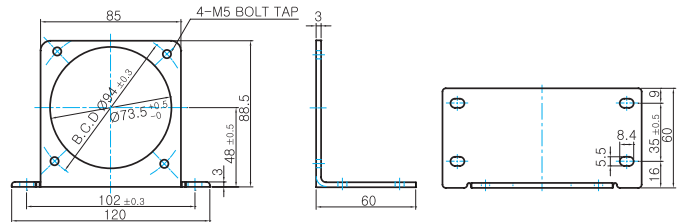


For Frame Size □80mm

● Model: DBKG-80

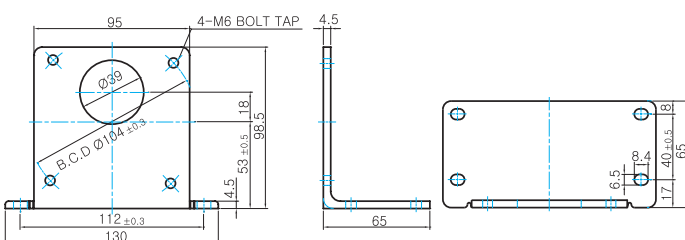


● Model: DBKM-80

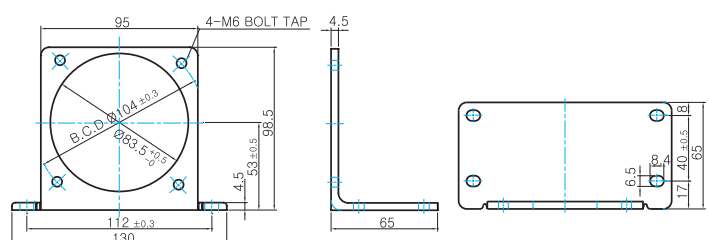


For Frame Size □90mm

● Model: DBKG-90



● Model: DBKM-90

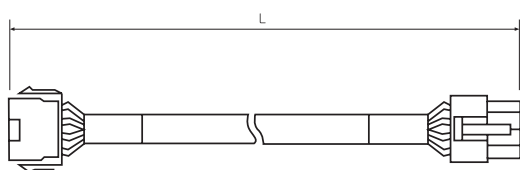


Extension Cable

This is for the connection between speed control motor and speed controller.
 The basic length of extension cable is 0.3m. So if longer needed,
 please order the cable additionally. There are 0.5/1.0/1.5/2.0/3.0/5.0m extension cables.



Dimension



MODEL	Length of cable (L)
DEW-05	0.5m
DEW-10	1.0m
DEW-15	1.5m
DEW-20	2.0m
DEW-30	3.0m
DEW-50	5.0m

E Options

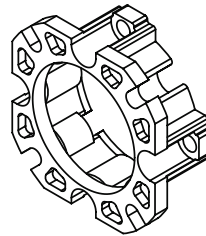
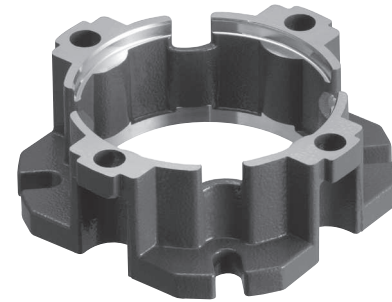
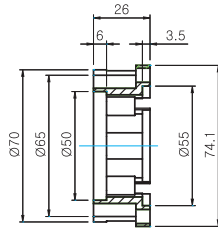
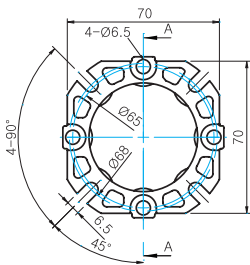
Output Flange / Output Shaft

Output Flange

It is available to fix/install worm hollow type gearhead by attaching output flange to the gearhead.

Dimensions

MODEL: WHG-030-F

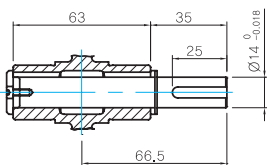


Output Shaft

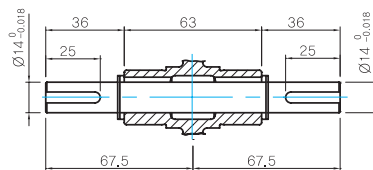
These are output shafts to be attached to worm hollow type gearhead. There are unidirectional output shaft and bi-directional output shaft.

Dimensions

Unidirectional MODEL: 15X92L



Bi-directional MODEL: 14X135L



KEY SPEC

